

SERVICE EVOLVES WITH SOLID TIRE

F. D. Phillips Shows How Improvements Have Gradually Perfected It for Use on Trucks.

By F. F. Phillips, Manager Solid Tire Dept., United States Tire Company.

It certainly must be apparent to any one harboring even a superficial knowledge of the commercial vehicle industry that in the development of the motor truck tires have been a most important factor. In fact, I believe I am justified in saying the most important factor, for in truck operation so much depends upon tire service that this feature of the equipment is bound to be a matter of direct concern to the owner.

Good tire service means the forging of a conspicuous link in the general chain of economic truck operation. Hence, the tire problem is the big and final one to be solved in making the truck a thoroughly practical proposition. No matter how perfectly a truck has been developed along other lines, it does not become a thing of general utility until it has been equipped with a load carrying foundation that will not only sustain weight and resist the wear and tear of road travel, but will yield a sufficient degree of resiliency to protect its mechanism as well.

Considering these facts, it is evident that without efficiency in the manufacture and a progressiveness commensurate with the importance of the industry, there could not have been the amazing development noted in the motor truck, particularly within the last three years.

Fastening Problem First.
From the beginning of this now extensive and constantly growing industry two problems have taken precedence over all others in the manufacture of solid tires.

The first and foremost of these in point of importance has been the devising of means to fasten the tire to the wheel so that it would hold. The other has been the proper compounding of rubber. The whole solid tire problem really hinges upon these two important details of construction.

Producing a rubber compound that would be both tough and strong and at the same time possess the necessary degree of resiliency has not been an altogether easy task. Yet solution of this question by no means has been a difficult matter of obtaining a permanent union between the tire base and the surface exposed to the roadway.

It has been comparatively easy to manufacture a tire that would give adequate mileage service, but it has not been so easy to maintain the unity of the tire until this service could be obtained. Experience showed that the surface was ripped from its base before the effects of usage had left any appreciable imprint. Early demonstration proved the impracticability of imbedding naked wires in soft rubber and attempting to form a holding base in this way. After being run a short time the rubber disintegrated and the new tire equipment was constantly required. This not only was very expensive, but extremely annoying as well, and manufacturers soon realized that the motor truck was to broaden its field and become a vehicle of general use another and more substantial form of tire construction would have to be devised.

Side Wire Serves Light Cars.
The next move in the evolution of the solid tire produced what is known as the side wire type, and this proved vastly superior to the one described above. A superstructure was formed by placing naked wires equal distances apart all around the tire. These were held in place by a circumferential wire engaging the ends of the cross wires and holding them in position. Various objections were offered to this tire, chief among which was the tendency of the wires to work themselves loose, wear holes in the rubber and impair the strength of the tire as a unit. The side wire tire is well suited to vehicles of the lighter type, and on such trucks is being used extensively to-day.

Experience gradually disclosed a great many defects in solid tire construction, which in time were largely overcome by setting the wires in a semi-hard rubber base and vulcanizing this to the soft rubber, a better joining being possible than where the soft rubber was placed in direct contact with the naked wires. Far better mileage returns were noticeable after the tire so built was placed on the market, and very satisfactory results were obtained in carrying loads of three tons or more. However, in my opinion, the last few months have brought about the most progressive steps in solid tire building that the industry has known. The metal base style of construction, now prevalent, in which a foundation of semi-hard rubber is dovetailed with a steel base, making a strong unit through vulcanization with the road surface of the tire, offers truck owners more actual mileage service than any solid tire yet devised.

And coupling a tire so constructed with dependable features overcoming practically all of the obstacles that have arisen when replacements are necessary, it seems to me there can be no questioning the fact that tire manufacturers are running neck and neck with the foremost leaders in motor truck development.

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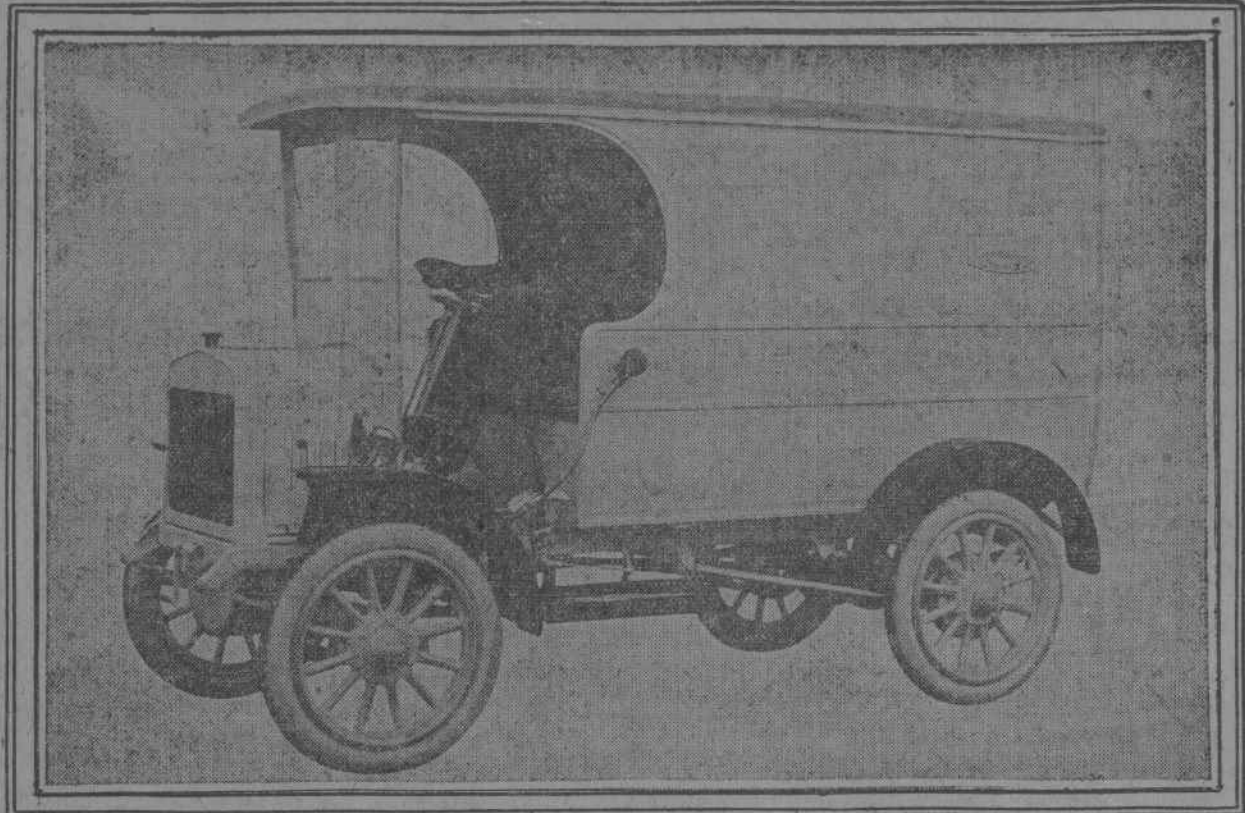
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Many Styles in Sampson Motor Wagons



SAMPSON DELIVERY WAGON.

The Sampson delivery wagon has a carrying capacity of 1,000 pounds, and may be had in any of five styles of stock bodies. The stock bodies are an open express, open flare board, screen panel, furniture top and a full wooden panel delivery. All these bodies have a loading space of sixty-nine inches.

It has a horizontal opposed type of

motor, having a bore and stroke of 4 1/2 inches. Cooling is by the thermo-siphon action, through a radiator of generous proportions. A multiple dry plate clutch transmits power to a three-speed and reverse selective change-speed gear, and the final drive is by means of a shaft to a live rear axle.

Motor, clutch and transmission gear

set are mounted on a subframe, in the three point suspension, and this unit is mounted in front under the hood where it is perfectly accessible. In order to give the driver easy access to the car from the sidewalk the steering column and change speed lever as well as the hand brake lever are placed at the left of the vehicle. Spark and throttle levers are directly under the steering wheel.

requirements. He may use every legiti-

SEES PASSING OF MOTOR AUTOCRAT

Manufacturer Who Once Dictated to Consumers, Mr. Joyce Declares, Has Had His Day.

By James Joyce, Sales Manager Selden Motor Vehicle Company.

In the early stages of the development of the automobile industry the manufacturer was very much of an autocrat and was able to dictate to the consumer very much as the saw fit. In the natural evolution of the business, however, things have changed and the manufacturer has been forced to yield to the demand of the consumer, and to cater to the well defined wants of a highly educated buying public.

The manufacturer who is alive to this condition is going to win out in the long run, and as surely the manufacturer who clings to an autocratic policy, even though he be backed up by ever so good a reputation for his product, will fail to hold his ground and will ultimately fall into the trap that he is setting for himself.

The autocrats of the automobile industry are being rapidly eliminated, and it is only a question of time when they will be forced to recede from their untenable positions, or to take the course usually followed when guided by unreasonable and short-sighted policies governing the relation of producer and consumer.

The buying public to-day knows what constitutes a good automobile, and it also appreciates pretty fully the relative values of the various makes of cars. In view of this fact and as well of the keen competition that exists to-day it behooves every manufacturer to listen to the suggestions of the car user and to accede in so far as he can to his demands rather than to assume an arbitrary and domineering position in relation to the middle man and ultimate consumer.

The successful business of the future is the one that adopts a broad and liberal policy toward its customers.

The obligation of an automobile manufacturer to a prospective buyer begins when the manufacturer first solicits the business. He must consider the requirements of the buyer. He should carefully determine whether or not he can fulfill those

requirements. He may use every legitimate means to sell to the purchaser in prospect if he is sure that his car fills the bill, and to use all his powers of persuasion as a salesman to convince the prospective customer that his car is all that he represents it to be. He may point out its characteristically good features and its advantages over other cars. If he succeeds in convincing the buyer by a truthful statement of facts and consummates a sale he has made a friend as well as a patron, whose good will and confidence will be worth more than all the money involved in the deal.

The manufacturer should endeavor to please his customers. Within certain reasonable limits he should endeavor to comply with demands dictated by the individual tastes of the buyer rather than to tell the prospective buyer to take his car just as he sees fit to produce it, or leave it. His specifications, wherever practicable, should be elastic, and he should not, for the sake of a few dollars more profit on a car, force people of different tastes and with different requirements all to accept his car just as it is, whether they like it or not. Little changes of color, equipment or other minor details often add a touch which insures complete satisfaction to the customer, when strict adherence to some foolish policy often brings business under conditions that can never be wholly satisfactory to either party.

NEW PUMP DRIVE.

One of the distinctive features of the 1912 Marmon motor is the method used to drive the pump and magneto shaft. The design and location of this mechanism has been a problem which engineers have been working on for some time. It has been solved in a practical way in the new Marmon by placing a small shaft inside the crank case at right angles to the crank shaft, just between the first and second cylinders and driving it by means of a set of helical gears. The pump is driven from one end of the shaft and the magneto from the other.

WEAKNESS IN CARBURETOR

The carburetor of the automobile has in the past been neglected, but in future will probably receive greater attention, being the only remaining part that has not been practically perfected.

It is well known to be the vital part of the machinery, and unless it is properly adjusted and gives its proper proportion of oxygen to gasoline will fail to do

its duty, causing the engine to stall at the most critical moment.

Owing to the great number of springs in most carburetors trouble is generally caused by change from heat to cold, or dry to humid weather, making it necessary to stop the car at frequent intervals for adjustment. Thus by constant tinkering with the carburetor it is finally out of adjustment permanently.

There is one carburetor at least which, having no springs, is not affected by atmospheric conditions.

PEERLESS CLIMBS HILLS.

A five ton Peerless truck operated by a company of this city climbs the Palisades hills, which in places have thirteen per cent grades, at a rate that permits six or seven trips from the factories in New Jersey to this city every day. These hills are known as horse killers. One or two trips a day over the route works a team to its limit.

On a hill in Portland, Ore., which in places has grades of eighteen and one-half per cent, and on which the roads are so soft that it is often necessary to lay planks to support the truck wheels, the Peerless three and five ton trucks of the Columbia Contract Company travel under full loads as part of their regular work.

In Pittsburg, Pa.; Cincinnati, Ohio; Fall River and Fitchburg, Mass., which are famous for their horse killing hills, the Peerless has added to its reputation as a hill climber.

The Peerless truck motor is of the long stroke type and delivers its power to the rear wheels through a four speed selective transmission. The wheels are large and are equipped with wide tires.

STEERS WITH WHEEL.

One of the things noticed by visitors at the Argo Electric booth at the Grand Central Palace is that the brougham shown steers with a wheel.

An exceptionally long wheel base and very low centre of gravity mark the Argo electric brougham as a distinct type. The exhibit includes the Argo electric wagon and a chainless light delivery car, employing the same Herringbone gear drive as the pleasure cars.

ABOLISHES YEARLY CHANGE IN MODEL

Franklin Production To Be Continuous, It Is Announced, and Improvements Made as Perfected.

By G. H. Bryant, Advertising Manager Franklin Automobile Company.

Consistent with what we have come to believe to be the most advanced and most businesslike policy, we have abolished the making of yearly announcements. Hereafter our cars will be built in series, and improvements will be made as they are perfected. We will not build as of any particular year, but production will be continuous.

The benefits of such an arrangement are already being felt in the increased interest with which dealers are viewing our proposition.

The yearly announcement has always had a tendency artificially to depreciate the owners' cars and to hurt the chances of the dealer for doing business in the spring. People have not been disposed to buy in the full knowledge that within a few months their cars would be reduced in value by the announcement of a new model, which perhaps did not differ essentially from the car which they owned, but which bore the mark of next year's product.

Under the new policy each owner as he buys his car knows he is getting the very latest product, and with our present standardized methods there probably will be very little change in any of the series. The same model will be continued indefinitely.

The old yearly announcement policy was the cause for artificial selling periods. Under the no yearly announcement plan there is no break in the selling; one month is as good as another, and selling, like the manufacture, will be continuous.

Buying a motor car is rapidly becoming like buying any other commodity. There is no reason why the demand should be different from the demand for any other staple.

The general impression among the more aggressive and more businesslike automobile dealers is that if they could offer a car without any strings attached to it in the way of approaching announcements they would find a ready market at all times.

It is to satisfy these dealers that a no yearly announcement policy is being adopted.

MANY OPERATIONS IN TIRE BUILDING

One Hundred and Fifty Steps Necessary to Make Shoe Out of Prepared Material.

By N. E. Oliver, Diamond Rubber Company.

Those who know a tire simply as a car accessory and are not familiar with its manufacture would be surprised to learn that nearly 150 operations are necessary to build an automobile tire. This figure does not include the countless operations necessary to prepare the material from which the tire is built. It simply represents those actual operations necessary to build a casing after all the material is in the stock rooms ready for the builders. The 150 operations include the numerous operations necessary to make bead, the tread and the body of the tire, to give a semi and the final cure and to finish it ready for shipment. For example, while beads are machine made, it is necessary to core, trim, wash, cement, buff and roll, and in addition gauge and measure them. In making up the body or carcass of the tire and in making the tread even more operations are necessary.

UNDERSLUNG POPULAR.

At the Grand Central Palace Show much interest has been manifested in underslung cars. The extensive line of underslung cars on exhibition has in it several cars that make strong bids for the chief attraction of this show. One model that has received much attention is a new 35-horse power Regal touring car. Several other moderate priced underslugs are also strong contenders for first honors. It appears that 1912 will be a banner year for the underslugs.

EASE IN RIDING AS PROMISE OF WEAR

T. R. Lippard Discusses Lack of Vibration as Factor That Extends Life of Car.

By T. R. Lippard, Vice President Lippard-Stewart Motor Car Company.

Although a great many persons would not think it important at first thought, the easy riding of a motor car is one of its most important qualities. In fact, it might truthfully be said that easy riding is fully as important in a commercial car as in a pleasure car—perhaps more so.

Ease of riding in a commercial car practically determines the life of the car and the amount of work that it can accomplish. The easier the car rides the faster it can be driven with comfort and safety over all sorts of roads. Also, the easier the car rides and the less vibration the longer the mechanism will last. Spring suspension, therefore, becomes one of the most important problems for the commercial car designer to solve.

Experience has shown that full elliptic springs in front are the best possible form to protect the motor and other mechanical parts from jolts and jars. For the rear spring suspension the conventional long semi-elliptic type have been found admirable, especially if supplemented by auxiliary coil springs.

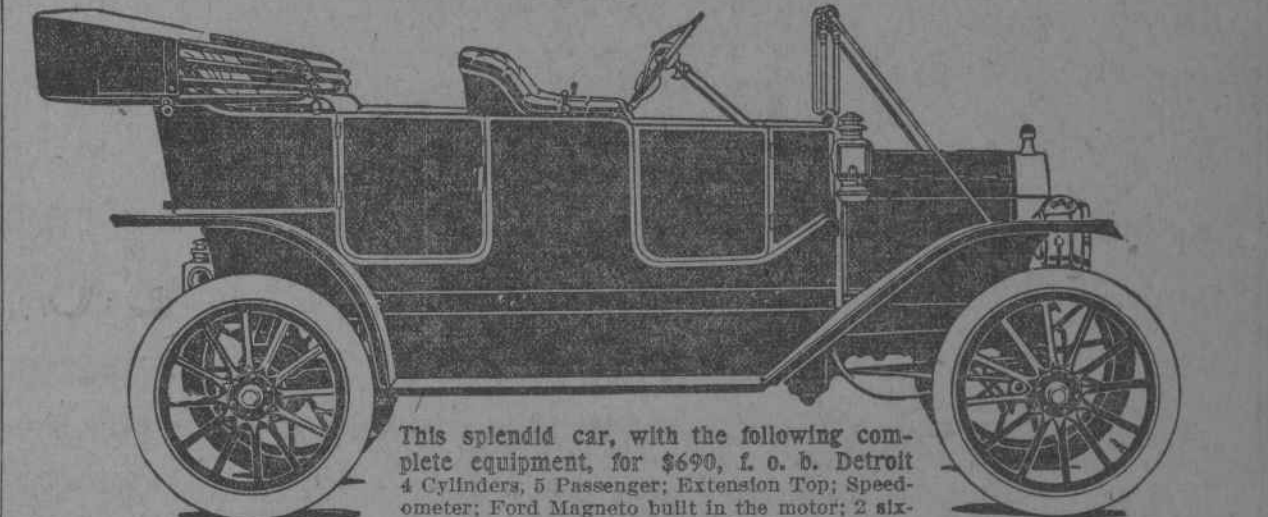
By means of this construction it is possible to build a commercial car that will run as easily when empty as it does when loaded. The long semi-elliptic springs are sufficient to take up all vibration when the car is running light. When the car is carrying a full load, however, the auxiliary coil springs come into play and assist the semi-elliptics in carrying the weight. This form of construction is one that has met with considerable success among European and American designers.

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